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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,359	03/09/2004	Stephen Boyer	909A.0156.U1(US)	4348

29683 7590 07/25/2008
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EXAMINER	
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ART UNIT	PAPER NUMBER
1631	

MAIL DATE	DELIVERY MODE
07/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/797,359	BOYER ET AL.	
	Examiner	Art Unit	
	KARLHEINZ R. SKOWRONEK	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Status

Claims 1-3, 6-21, 24-39 and 42-46 are pending.

Claims 4-5, 22-23, and 40-41 are cancelled.

Claims 1-3, 6-21, 24-39 and 42-46 are being examined.

Claim Rejections - 35 USC § 102

Response to Arguments

Applicant's arguments, see Remarks p. 16-18, filed 25 April 2008, with respect to the rejection of claims 1, 4, 7, 9-15, and 17 as anticipated by Garfield under 35 USC 102(b) have been fully considered. The rejection of claims 1, 4, 7, 9-15, and 17 has been withdrawn in view of the amendment of the claims.

Claim Rejections - 35 USC § 103

Response to Arguments

Applicant's arguments, see Remarks p. 18-23, filed 25 April 2008, with respect to the rejection of claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 as unpatentable over Friedman, in view of Brecher and in view of Moore et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 has been withdrawn in view of the amendment of the claims.

Applicant's arguments, see Remarks p. 23-24, filed 25 April 2008, with respect to the rejection of claims 2-3, 6, 20-21, 24, 38-39, and 42 as unpatentable over Friedman, in view of Brecher and in view of Moore et al, as applied to claims 1, 4, 7, 9-15, 17, 19,

22, 25, 27-33, 35, 37, and 40 above, and further in view of Hull et al. under 35USC 103(a) have been fully considered. The rejection of claims 2-3, 6, 20-21, 24, 38-39, and 42 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 24, filed 25 April 2008, with respect to rejection of claims 5, 16, 23, 34, and 41 as unpatentable over Friedman, in view of Brecher and in view of Moore et al. as applied to claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 above, and further in view of Dittmar et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claims 5, 16, 23, 34, and 41 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 25, filed 25 April 2008, with respect to rejection of claims 8 and 26 as unpatentable over Friedman, in view of Brecher and in view of Moore et al. as applied to claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 above, and further in view of Drefahl et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claims 8 and 26 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 26, filed 25 April 2008, with respect to rejection of claims 18 and 36 as unpatentable over Friedman, in view of Brecher and in view of Moore et al, as applied to claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 above, and further in view of Kemp et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claims 8 and 26 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 26, filed 25 April 2008, with respect to rejection of claim 43 as unpatentable over Friedman, in view of Brecher and in view of Moore et al as applied to claims 1, 4, 7, 9-15, 17, 19, 22, 25, 27-33, 35, 37, and 40 above, and Shivaratri et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claim 43 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 26, filed 25 April 2008, with respect to rejection of claim 44 as unpatentable over Friedman, in view of Brecher, in view of Moore et al. and Shivaratri et al. as applied to claim 43 above, and further in view of Leiter et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claim 44 has been withdrawn in view of the amendments to the claims.

Applicant's arguments, see Remarks p. 26, filed 25 April 2008, with respect to rejection of claims 45 and 46 as unpatentable over Friedman, in view of Brecher and in view of Moore et al, and Shivaratri et al. as applied to claim 43 above, and further in view of Drefahl et al. under 35 U.S.C. 103(a) have been fully considered. The rejection of claims 45 and 46 has been withdrawn in view of the amendments to the claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The following rejection is necessitated by amend of the claims.

Claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman (US PAT 6,182,029), in view of Brecher (US PAT 7,054,754) in view of Moore et al. (US PAT 5,577,239) in view of Dittmar et al. (J. Chem. Inf. Comput. Sci., Vol. 23, No. 3, p93-102, 1983), in view of Hull et al. (US PAT 6,332,138) and in view of Leiter et al. (J. Chem. Doc., Vol. 15, No. 4, p. 238-242, 1965).

The claims are directed to a method of processing a text document, comprising: partitioning text of the text document and assigning semantic meaning to words, where assigning comprises applying a plurality of regular expressions, rules and a plurality of

dictionaries to recognize chemical name fragments; recognizing any substructures present in the chemical name fragments; and determining structural connectivity information of the chemical name fragments and recognized substructures; extracting identifying information from the recognized chemical name fragments and substructures and storing the identifying information with determined structural connectivity information in a searchable index. Some embodiments are drawn to searching an index by at least one of a fragment or substructure connectivity using a graphical user interface. Some embodiments are drawn characters comprising at least one of upper case C, O, R, N, H. In an embodiment, extracting comprises extracting text terms and indexing the terms and the search comprises a substructure graphical representation and a text term. In an embodiment, extracting comprises extracting text terms and indexing the terms and the search comprises entering a text term and a structural connectivity. In an embodiment, searching further comprises entering at least one search term and the search results an indexed representation and indexed text to identify a document relating to a chemical compound. Similarly, claim 19 is drawn to a system and claim 37 is drawn to a computer program product automating the method of claim 1 and its dependents.

Friedman shows a method and system for extracting information from natural language text data. Friedman shows information is extracted from text documents (col. 4, line 59-63). Friedman shows that the text of the text document is partitioned into phrases (col. 6, line 36-45). Friedman shows that partitioned phrases are further parsed to assign semantic meaning to words (col. 6, line 63-65). Friedman suggests that

chemical information can be identified and extracted (col. 11, line 34-50). Friedman shows the method provides reliable and efficient access to information within a document and is useful for retrieving and summarizing relevant information in documents (col. 4, line 59-67).

Friedman does not show the application of regular expressions and a plurality of chemical dictionaries to recognize chemical names or storing information in a searchable index.

Brecher shows a method system and computer program product for processing text documents to extract chemical information. Brecher shows the application of regular expression (col. 5, line 41-45) and a plurality of dictionaries to recognize chemical names (col. 6, line 29-40). Brecher shows that the lexicon has at least a sub lexicon to identify stopwords (col. 8, line 49-50), prefixes (col. 9, line 55) or suffixes (col. 11, line 43). Brecher shows that substructures are recognized (col. 6, line 31-33). Brecher shows that structural connectivity is determined (col.7, line 35-57). Brecher et al. shows that identifying information is extracted from the substructures and fragments to produce a fully parsed chemical name that is correlated to a chemical structure. Brecher shows the method allows chemical names to be accurately converted to chemical structures in real time or in nearly real time to provide users with a powerful, practical tool (col. 2, line 11-14).

Moore et al. shows a method of storing extracted identifying information in a searchable index (col. 4, line 28-35). Moore et al. shows that the index can be searched by a combination of substructure names, reading on text terms and keywords

(col. 7, line 47-48) and connectivities, reading on graphical representations (col. 10, line 43-46). Moore shows that multiple databases can be interrelated to form a relational database forming an integrated chemical information system that can be searched using combination searches (col. 11, line 1-8). Moore et al. shows the method has the advantage of simplified search queries (col. 12, line 42-46). Moore et al. shows the method has the further advantages of reducing database development and maintenance costs, simplify interfacing with other information systems (col. 2, line 10-23).

Friedman, in view of Brecher and in view of Moore et al. does not teach searching an index by at least one of a fragment or substructure connectivity using a graphical user interface or characters comprising at least one of upper case C, O, R, N, H.

Dittmar et al. shows searching an index by at least one of a fragment or substructure connectivity (p.99, col. 2, para2, sent. 1) using a graphical user interface (p. 93, col. 1, para. 3, sent. 2). Dittmar et al. shows characters comprising at least one of upper case C, O, R, N, H (p. 98, col. 1 par 2, sent. 3; para.3, sent. 1; and p. 99, para 2-3). Dittmar et al. shows the implementation of a user interface to simplify searching (p. 93, col. 1, para 3, sent. 1).

Hull et al shows extracting keywords and storing identifying information and keywords in association with structural connectivity in a searchable index and then searching the index using a keyword and a chemical fragment. Hull teaches extracting keywords from the document (col. 9, lines 15 -32). Extracted identifying information is

stored in association with structural connectivity information in a searchable matrix (index) (col.10, lines 32-52). Hull et al. teach the searching of the index by a keyword and a fragment/substructure name or connectivity (col. 16, lines 21-33, and col. 13, lines 40 -67). Hull describes an embodiment in which the search is a combined structure and text query (col. 16, lines 21-33). Hull describes that the search result identifies documents that are the intersection of the combined query terms relating to the corresponding chemical compound (col. 16, lines 28-33). Hull et al. shows the method allows researchers to take advantage of past experiments described in the literature to gain an advantage in the development of new drugs (col.12, line 17-20). Hull et al. shows the method will allow the identification of potential uses for and/or problems with new drugs saving millions of dollars in research and development costs (col. 12, line 15-17). Hull et al. demonstrates the success of the method to identify compounds sharing substructures (col 12, line 22 to col. 15, line 25).

Leiter et al. shows the storage of structural information and text information (reading on keywords) in searchable indices (Fig 2). Leiter et al. shows searching indices to identify documents related to a chemical compound (p. 238, col. 2, lines 5-7).

It would have been obvious to one skilled in the art to modify the method of extracting information from natural language text documents of Friedman with the method of extracting chemical information from text of Brecher and the method of storing and searching chemical identifying information of Moore et al. because Brecher shows chemical names can be accurately converted to chemical structures in real time or in nearly real time which is advantageous. It would have been further obvious to

modify the method of extracting information from natural language text documents of Friedman with the method of extracting chemical information from text of Brecher and the method of storing and searching chemical identifying information of Moore et al. because Moore et al. shows the method has the advantages of reducing database development and maintenance costs, simplify interfacing with other information systems. It would have been further obvious to combine the teaching Friedman, in view of Brecher and in view of Moore et al. with the graphical user interface of Dittmar et al. because Dittmar et al. teach the implementation of a user interface to simplify searching (p. 93, col. 1, para 3, sent. 1). It would have been further obvious to combine the teaching Friedman, in view of Brecher in view of Moore et al. and the graphical user interface of Dittmar et al. with the method of Hull et al. keyword extraction, storage of identifying information in association with chemical structural connectivity and the searching of the index by a keyword and chemical connectivity or name because Hull et al. teach the method allows researchers to take advantage of past experiments described in the literature to gain an advantage in the development of new drugs. One would have been motivated to do so by Hull et al. because Hull et al. shows the method will allow the identification of potential uses for and/or problems with new drugs saving millions of dollars in research and development costs. It would have been further obvious to combine the method and system of Friedman, in view of Brecher in view of Moore et al., in view of Dittmar et al. and the method of Hull et al. demonstrating keyword extraction, storage of identifying information in association with chemical structural connectivity and the searching of the index by a keyword and chemical

connectivity or name with the indices of Leiter et al. because the combination of the three references provides the functionality of using the indices to find documents of interest quickly and efficiently.

The following rejection is necessitated by amend of the claims.

Claims 8 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above, and further in view of Drefahl et al. (J. Chem. Inf. Comput. Sci., Vol. 33, 886-895,1993) and Murray-Rust et al. (New J. Chem., Vol. 25, p 618-634, 2001).

Claims 8 and 26 are directed to representations comprising MOL type and SMILES type representations.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above does not show representations comprising MOL type and SMILES type representations.

Drefahl et al. teach a structure dictionary comprising at least one of a MOL dictionary and a SMILES dictionary (abstract, sent. 3). Drefahl et al. shows representations comprising SMILES type representations (p.888).

Murray-Rust et al. shows chemical representations can be MOL type representation and SMILES type representations (p. 626). Murray-Rust et al. shows MOL type representations have the advantage of being extremely terse (p. 626, col. 1).

It would have been obvious to combine the teachings of Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above and the SMILES and MOL notations of Drefahl et al. and Murray Rust et al. because Drefahl et al. and Murray-Rust et al. show that SMILES and MOL notations provides a compact and computationally amenable way to encode chemical structure information.

One would have had a reasonable expectation of success because Drefahl et al. describe the successful application of a SMILES dictionary structure-based retrieval and searching.

The following rejection is necessitated by amend of the claims.

Claim 18 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above, and further in view of Kemp et al. (J. Chem. Inf. Comput. Sci., Vol. 38, p. 544-551, 1998).

Claims 18 and 36 are drawn to tokenizing a document to produce a series of tokens.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above does not teach tokenizing a document to produce a series of tokens.

Kemp et al. teach the tokenization of documents into a sequence of tokens (p. 547, 2nd para, sent. 2).

It would have been obvious to one of ordinary skill in the art to combine the method of Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above with the tokenization of Kemp et al. because Kemp et al. shows tokenization is useful to prepare data for automated analysis. One would have had a reasonable expectation of success because Kemp et al. teach regarding text processing procedures that even simple methods can achieve very high degree of success (Kemp et al., abstract).

The following rejection is necessitated by amend of the claims.

Claims 43-44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. as applied to claims 1-3, 6-7, 9-17, 19-21, 24-25, 27-35, 37-39, and 42 above, and Shivaratri et al. (Computer, p. 33-44,December 1992).

The claim is directed to a system of computers coupled through a data communications network comprising a unit to parse document text; a unit to recognize substructures in chemical name fragments; a unit to identify structural connectivity in fragments and substructures and store the structural connectivity information in a searchable index.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. teaches a method of parsing text to

recognize chemical name fragments and any substructures in the chemical name fragments substructures as described above.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al.. teaches determination of structural connectivity information of the chemical name and substructures as described above.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. does not teach a system of computers coupled through a data communications network.

Shivaratri et al. teach a system of computers coupled through a data communication network to generate a distributed computing system (p. 33, para 4, sent. I).

It would have been obvious to combine the method of Friedman, in view of Brecher and in view of Moore et al. with the teachings of Shivaratri et al. because distributing computational loads improves performance of computational tasks.

One would have been motivated by Shivaratri et al. who describe the advantages of distributed computing systems as offering high performance, availability, and extensibility at low cost (p. 33, para. 1, sent.2).

One would have had a reasonable expectation of success because Shivaratri et al. describe the successful implementation of distributed computing systems.

The following rejection is necessitated by amend of the claims.

Claim 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of

Hull et al. and in view of Leiter et al., and Shivaratri et al. as applied to claim 43 above, and further in view of Drefahl et al. (J. Chem. Inf. Comput. Sci., Vol. 33, 886-895,1993) and Murray-Rust et al. (New J. Chem., Vol. 25, p 618-634, 2001).

Claim 45 is directed to a structure dictionary that is used to determine structural connectivity information.

Claim 46 is directed to representations comprising MOL type and SMILES type representations.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. teaches a structure dictionary that is used to determine structural connectivity information as described above.

Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view of Leiter et al. and Shivaratri et al. does not teach a structure dictionary comprising at least one of a MOL dictionary and a SMILES dictionary.

Drefahl et al. teach a structure dictionary comprising at least one of a MOL dictionary and a SMILES dictionary (abstract, sent. 3). Drefahl et al. shows representations comprising SMILES type representations (p.888).

Murray-Rust et al. shows chemical representations can be MOL type representation and SMILES type representations (p. 626). Murray-Rust et al. shows MOL type representations have the advantage of being extremely terse (p. 626, col. 1).

It would have been obvious to combine the teachings of Friedman, in view of Brecher, in view of Moore et al., in view of Dittmar et al., in view of Hull et al. and in view

of Leiter et al. and Shivaratri et al. and Drefahl et al. because Drefahl et al. and Murray-Rust et al. show that SMILES and MOL notations provides a compact and computationally amenable way to encode chemical structure information. One would have been motivated by Shivaratri et al. who describe the advantages of distributed computing systems as offering high performance, availability, and extensibility at low cost (p. 33, para. 1, sent.2). One would have had a reasonable expectation of success because Shivaratri et al. describe the successful implementation of distributed computing systems.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLHEINZ R. SKOWRONEK whose telephone number is (571) 272-9047. The examiner can normally be reached on 8:00am-5:00pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran can be reached on (571) 272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

18 July 2008

/K. R. S./
Examiner, Art Unit 1631
/John S. Brusca/
Primary Examiner, Art Unit 1631